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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/804,709 | 03/22/2004 | Charles Dow Raymond | | 7533 |

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EXAMINER

WHITE, DWAYNE J

ART UNIT

PAPER NUMBER

3745

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/804,709 | Applicant(s) RAYMOND, CHARLES DOW | |
| | Examiner Dwayne J. White | Art Unit 3745 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-14 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/22/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the fluid passages between the vanes being near to tangential but curving toward radial and being radial near the periphery of the cylinder of rotation and then turning away from the direction of rotation, and continuing in a peripheral direction around a circular path to end by the vane extending axially outward to a close tolerance with the cylindrical wall of the housing chamber as claimed in claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: Specifically, Applicant uses the terms radial and axial when referring to the position of particular structures of the invention. However, Applicant's use of the terms does not conform to the excepted definition of the art. For example, on page 15, line 11; Applicant recites "fluid is forced **axially** outward by the diverging shape of the intake plenum." Since Applicant has not established a particular axis, the Examiner is assuming axial and radial positions are in respect to the axis of rotation created by the rotor shaft 4. As such, the fluid would be forced **radially** outward by the diverging shape of the intake plenum, not **axially**. This error is repeated throughout the Specification. The Examiner encourages Applicant to review and revise the use of these terms.

Claim Objections

Claims 7 and 10 are objected to because of the following informalities:

In claim 7, line 2; "racially" should be --radially--.

In claim 10, line 3; "discharge" should be --discharge port--.

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Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-6, 11-14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "approximately cylindrical chamber wall" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 2, recites the limitation "A motor as in claim 1." Claim 1 is directed to a fluid kinetic pump and therefore it is unclear whether applicant is further limiting a pump or a motor. As such, the metes and bounds of claim 2 have not been established. Appropriate correction is required.

Claim 3 recites the limitation "the axially inner tip" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the vane" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the intake plenum" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the outer cylinder of revolution" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the second housing" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the rotation vane tip" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the axially outer vane tip" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the axially inner zone" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 6, recites the limitation "another tangential means," however there are no other tangential means recited in the claim or the claim from which it depends. Clarification is required.

Claim 8 recites the limitation "the intake plenum" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the intake plenum" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the sector length" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 is rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure, which goes to make up the device, must be clearly and positively specified. The structure must be organized and correlated in such a manner as to

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present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “axial” in claims 4, 11, 12 and 14 is used by the claim to mean “in the direction away from the axis of rotation”, while the accepted meaning is “the direction along the axis of rotation.” The term is indefinite because the specification does not clearly redefine the term.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 13 recites the broad recitation of

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the intake means allowing slurries, sludge, or other semi-liquid fluids, and the claim also recites “said slurry intake” which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Price (3,698,832). Price discloses a fluid kinetic pump comprising a rotor element having a shaft (not shown) and an inner cylindrical cavity and a outer cylindrical surface, and having at least one fluid passage intersecting the cylindrical inner rotor cavity tangentially in the direction of rotation and the width of the fluid passage at the intersection is greatest within the fluid passage (see Figure 2); an inner intake means 11; a tangential discharge port 12. The rotor element is fixed for rotation with a cylindrical cavity of a housing 10 and in close proximity to the housing wall. Vanes 20 intersects the intake plenum tangentially and are angled from the inner tip away from the direction of rotation

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of Ask (3,776,657). Price discloses all of the claimed subject matter except a conical rotor surface.

Ask teaches a fluid kinetic pump having a conical rotor surface. Since both Price and Ask disclose fluid kinetic pumps and it is well known in the art for the rotor hub to be conical, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the rotor hub of Price, with the teaches of Ask, by providing the rotor with a conical surface for the purpose of directing fluid coming from the inlet.

CONCLUSION

Allowable Subject Matter

Claims 4 and 6-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4, 6, 11-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

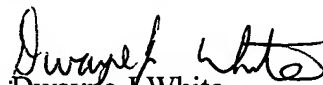
Chow et al. (3,773,432) disclose a bi-directional pump having plural discharge ports.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne J. White whose telephone number is (571) 272-4825. The examiner can normally be reached on 7:00 am to 4 pm T-F and alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dwayne J. White
Patent Examiner
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9/6/05